

WHAT IS CLAIMED IS:

1. An ink jet printing apparatus that prints a print medium by causing a printing section including color nozzle  
5 rows corresponding to a plurality of four or more colors to carry out a main scan in a main scanning direction, while causing said printing section to eject ink onto the print medium,

wherein a nozzle row for a first ink color and a nozzle  
10 row for a second ink color are arranged at opposite ends of said printing section in the main scanning direction, a hue difference between said first and second ink colors being the largest among said plurality of colors.

15 2. An ink jet printing apparatus that prints a print medium by causing a printing section having nozzle rows corresponding to respective colors and each composed of a plurality of nozzles arranged in a predetermined direction to carry out a main scan in a direction orthogonal to said  
20 predetermined direction, while causing said printing section to eject ink onto the print medium during the scan,

wherein in the direction orthogonal to said predetermined direction, between nozzle rows for a first and second ink colors having the largest hue difference  
25 from each other among said plurality of colors, nozzle rows for at least two colors other than said first and second colors are arranged.

3. An ink jet printing apparatus that prints a print medium by causing a printing section comprising color nozzle rows corresponding to a plurality of colors including black to carry out a main scan in a main scanning direction, while causing said printing section to eject ink onto the print medium,

wherein a nozzle row for a first ink color and a nozzle row for a second ink color are arranged at opposite ends of said printing section in the main scanning direction, a hue difference between said first and second ink colors being the largest among said plurality of colors, and a nozzle row for black ink is sandwiched between said nozzle row for said first ink color and said nozzle row for said second ink color.

4. An ink jet printing apparatus that prints a print medium by causing a printing section comprising color nozzle rows corresponding to black and a plurality of color inks to carry out a main scan in a main scanning direction, while causing said printing section to eject ink onto the print medium,

wherein along said main scanning direction, a nozzle row for a first ink color and a nozzle row for a second ink color are arranged at the largest distance from each other among said nozzle rows for said color inks, a hue difference between said first and second ink colors being

the largest among said color inks.

5        5. An ink jet printing apparatus according to Claim  
1, wherein said nozzle rows of said printing section include  
a nozzle row for cyan ink, a nozzle row for black ink, a  
nozzle row for yellow ink, and a nozzle row for magenta  
ink, and

      said nozzle row for the first ink color is the nozzle  
row for cyan ink, and said nozzle row for the second ink  
10    color is the nozzle row for magenta ink.

      6. An ink jet printing apparatus according to Claim  
5, wherein in the main scanning direction, the color nozzle  
rows of said printing section are arranged in the order  
15    of the nozzle row for cyan ink, the nozzle row for black  
ink, the nozzle row for yellow ink, and the nozzle row for  
magenta ink.

      7. An ink jet printing apparatus according to Claim  
20    1, wherein said nozzle rows of said printing section include  
a nozzle row for cyan ink, a nozzle row for light cyan ink,  
a nozzle row for black ink, a nozzle row for yellow ink,  
a nozzle row for light magenta ink, and a nozzle row for  
magenta ink, and

25        said nozzle row for the first ink color is the nozzle  
row for cyan ink, and said nozzle row for the second ink  
color is the nozzle row for magenta ink.

8. An ink jet printing apparatus according to Claim 7, wherein in the main scanning direction, the color nozzle rows of said printing section are arranged in the order of the nozzle row for cyan ink, the nozzle row for light cyan, the nozzle row for black ink, the nozzle row for yellow ink, the nozzle row for light magenta ink, and the nozzle row for magenta ink.

9. An ink jet printing apparatus according to Claim 2, wherein at least one of the nozzle rows located at the ends in the main scanning direction of said print head section is the nozzle row for black ink.

10. An ink jet printing apparatus according to Claim 1, wherein the nozzle rows of said printing section include nozzle rows through which inks having the same color but different densities are ejected, and

said nozzle rows for the inks having the same color but different densities are arranged adjacent to each other in the main scanning direction.

11. An ink jet printing apparatus according to Claim 1, wherein when a secondary color dot is formed on said print medium by ejecting ink during both a forward main scan of said printing section and a backward main scan of said printing section, an ink overlapping order is different

between the printing in said forward main scan and the printing in said backward main scan.

12. An ink jet printing apparatus according to Claim 5 11, wherein when said secondary color is formed, time elapsing until an ink droplet of one of the two colors impacts an ink dot formed by a previously ejected ink droplet of the other color impacting the print medium is longest for a combination of said first ink color and said second ink 10 color.

13. An ink jet printing method of printing a print medium by causing a printing section including color nozzle rows corresponding to a plurality of four or more colors 15 to carry out a main scan in a main scanning direction, while causing said printing section to eject ink onto the print medium,

wherein a nozzle row for a first ink color and a nozzle row for a second ink color are arranged at opposite ends 20 of said printing section in the main scanning direction, a hue difference between said first and second ink colors being the largest among said plurality of colors.

14. An ink jet printing method of printing a print 25 medium by causing a printing section having nozzle rows corresponding to respective colors and each composed of a plurality of nozzles arranged in a predetermined direction

to carry out a main scan in a direction orthogonal to said predetermined direction, while causing said printing section to eject ink onto the print medium during the scan,

5 wherein in said direction orthogonal to said predetermined direction, between nozzle rows for a first and second ink colors having the largest hue difference from each other among said plurality of colors, nozzle rows for at least two colors other than the first and second colors are arranged.

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15 15. An ink jet printing method of printing a print medium by causing a printing section comprising color nozzle rows corresponding to a plurality of colors including black to carry out a main scan in a main scanning direction, while causing said printing section to eject ink onto the print medium,

20 wherein a nozzle row for a first ink color and a nozzle row for a second ink color are arranged at opposite ends of said printing section in the main scanning direction, said first and second ink colors having the largest hue difference among said plurality of colors, and a nozzle row for black ink is sandwiched between said nozzle row for said first ink color and said nozzle row for said second ink color.

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16. An ink jet printing method of printing a print medium by causing a printing section comprising color nozzle

rows corresponding to black and a plurality of color inks to carry out a main scan in a main scanning direction, while causing said printing section to eject ink onto the print medium,

5            wherein along said main scanning direction, a nozzle row for a first ink color and a nozzle row for a second ink color are arranged at the largest distance from each other among said nozzle rows for said color inks, a hue difference between said first and second ink colors being  
10       the largest among said color inks.

17. An ink jet print head including color nozzle rows corresponding to a plurality of four or more colors, respectively,

15           wherein each of said color nozzle rows is composed of a plurality of nozzles arranged in a first direction, and a nozzle row for a first ink color and a nozzle row for a second ink color are arranged at opposite ends in a second direction orthogonal to said first direction, said  
20       first and second ink colors being included in said plurality of colors and having the largest hue difference from each other among said plurality of colors.

18. An ink jet print head having nozzle rows  
25       corresponding to respective colors and each composed of a plurality of nozzles arranged in a first direction,  
             wherein in a second direction orthogonal to said first

direction, between nozzle rows for a first and second ink colors having the largest hue difference from each other among said plurality of colors, nozzle rows for at least two colors other than the first and second colors are  
5 arranged.

19. An ink jet print head comprising color nozzle rows corresponding to a plurality of colors including black, respectively,

10 wherein each of said color nozzle rows is composed of a plurality of nozzles arranged in a first direction, and

wherein a nozzle row for a first ink color and a nozzle row for a second ink color are arranged at opposite ends  
15 in the second direction orthogonal to said first direction, a hue difference between said first and second ink colors being the largest among said plurality of colors, and a nozzle row for black ink is sandwiched between said nozzle row for said first ink color and said nozzle row for said  
20 second ink color.

20. An ink jet print head comprising color nozzle rows corresponding to black and a plurality of color inks, respectively,

25 wherein each of said color nozzle rows is composed of a plurality of nozzles arranged in a first direction, and



along a second direction orthogonal to said first direction, a nozzle row for a first ink color and a nozzle row for a second ink color are arranged at the largest distance from each other among said nozzle rows for said color inks, said first and second ink colors having the largest hue difference among said color inks.

21. An ink jet printing method of printing a print medium by causing a printing section provided with color nozzle rows corresponding to a plurality of colors, respectively, to carry out a main scan in a direction orthogonal to a predetermined direction, while causing said printing section to eject ink onto the print medium during the main scan,

wherein color nozzle rows for a combination of two colors are arranged at opposite ends of said printing section in the main scanning direction, the combination of two colors having the largest color difference between an image obtained during a forward main scan and an image obtained during a backward main scan using arbitrary two of said plurality of colors.

22. An ink jet printing method of printing a print medium by causing a printing section including a black nozzle row corresponding to black ink and color nozzle rows corresponding to a plurality of color inks, respectively, to carry out a main scanning direction, while causing said

printing section to eject ink onto the print medium during the main scan,

5 wherein color nozzle rows for a combination of two colors are arranged at the largest distance from each other in said main scanning direction among said color nozzle rows, the combination of two colors having the largest color difference between an image obtained during a forward main scan and an image obtained during a backward main scan using arbitrary two of said plurality of color inks.